

CLOCK GENERATOR FOR GENERATING ACCURATE
AND LOW-JITTER CLOCK

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ABSTRACT OF THE DISCLOSURE

10 A clock generator has a clock generating circuit, a
phase difference detection circuit, and a control signal
generating circuit. The clock generating circuit has a
function for varying a clock phase in accordance with a
control signal, the phase difference detection circuit
15 compares the clock phase output from the clock generating
circuit with a phase of a reference waveform, and
detecting a phase difference therebetween, and the
control signal generating circuit generates a control
signal for controlling the clock phase of the clock
generating circuit, based on phase difference information
20 obtained from the phase difference detection circuit.
The phase difference detection circuit has a plurality of
phase detection units, at least one of the plurality of
phase detection units carries out a direct phase
detection in which a phase of the clock is directly
25 compared with the phase of the reference waveform, and at
least the other one of the plurality of phase detection
units carries out an indirect phase detection using a
phase-synchronized waveform generating circuit generating
a waveform synchronized in phase with the reference
30 waveform or an output of the clock generating circuit and
a phase information extracting circuit extracting phase
information from the phase-synchronized waveform.